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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/389,386	09/03/1999	PATRICK IZQUIERDO	225/48098	5368

7590 06/04/2002

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Washington, DC 20044-4300

EXAMINER

NGUYEN, TRINH T

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 06/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/389,386

Applicant(s)

Izquierdo et al.

Examiner

Trinh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed 2/25/02.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3,4,10,11,24-27 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,4,10,11,24-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## **DETAILED ACTION**

### ***Claim Objections***

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 23-26 have been renumbered as 24-27 respectively.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3, 4, 10, 11, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirt (US 4,625,465) in view of Palazzolo et al. (US 5,691,004).

Kirt teaches a method for surface treatment of an interior of a hollow body such as an engine cylinder bore (10), wherein the method comprising the step of dry-cutting, i.e., honing, milling, drilling, brushing, knurling, and/or abrading, the interior of the hollow body (11) by

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using a tool (23, 36) to remove a surface material therein (note that Kirt's method for surface treatment of an interior of a hollow body such as an engine cylinder bore does not require lubrication).

Kirt teaches the claimed invention but lacks the teaching of 1) thermally spraying a layer to the surface of the hollow body, i.e. engine cylinder bore, after dry-cutting and 2) having "a roughness value of from 25 to 65  $\mu\text{m}$ ".

Regarding 1), note in the Abstract, Palazzolo et al. teach that after the honing/dry-cutting step the interior surface of the hollow body is thermally sprayed with a coat in order to increase the wear resistance and the lubricity of the hollow body. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have thermally sprayed a layer onto a surface of Kirt's hollow body, in a similar manner as taught in Palazzolo, for the purpose of increasing the wear resistance and lubricity thereof.

Regarding 2), it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the roughness set to a certain specific range as claimed, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claim 4, it is noted that Kirt's tool includes the use of stones (37) in the honing process. However, it does not specifically indicate that the stone used in the tool comprises cubic boron nitride, polycrystalline diamond, a coated or uncoated hard metal or a ceramic. Palazzolo et al., on the other hand, disclose that a honing tool can be comprised of any hard material such

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as boron nitride, coated or uncoated metal, or even diamond so as to roughen the inner surfaces of a cylinder bore (see lines 1-20 of col. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the use of boron nitride, coated or uncoated metal, and/or diamond in Kirt's tool, in a similar manner as taught in Palazzolo, in order to efficiently roughen the inner surfaces of a engine cylinder bore.

Regarding claims 10 and 11, note that Kirt's tool (23, 36) can be interpreted as an indexing insert wherein the tool is fitted with a plurality of indexing inserts (27, 37).

***Response to Arguments***

4. Applicant's arguments with respect to claims 3, 4, 10, and 11 have been considered but are moot in view of the new ground(s) of rejection.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

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will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***


Official documents related to the instant application may be submitted to the Technology Center 3700 mail center by facsimile at (703) 305-3579/3580.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1148.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh Nguyen whose telephone number is (703) 306-9082.

ttn *TTN*

May 31, 2002

  
S. THOMAS HUGHES  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700